Patent Application of

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for

ATTACHABLE FISH ATTRACTANT AND METHOD

CROSS-REFERENCES TO RELATED APPLICATIONS

This application is a continuation-in-part of U.S. Application Serial Number 10/202,715, which was filed on July 24, 2002.

STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT

Not Applicable.

MICROFICHE APPENDIX

Not Applicable

BACKGROUND OF THE INVENTION

1. Field of the Invention.

This invention relates to the field of fishing equipment. More specifically, the invention comprises a molded fish attractant which can be easily attached to a fishing line, along with a method for its use.

2. Description of the Related Art.

Artificial baits have been in common use for many years. One such device is illustrated in FIG. 1. Artificial lure **10** is shaped to mimic the action of a bait fish as it is pulled through the water. Fishing line **14** is typically connected on one end to a fishing rod. The other end is tied to the leading portion of swivel **16**. The trailing portion of swivel **16** is tied to a second much shorter piece of fishing line, denoted leader **18**. The swivel shown is merely representative of the connecting hardware in common use.

Leader **18** is typically quite short, extending as little as 12 to 24 inches. It is often made from heavier gage line than fishing line **14**, so that it can withstand a bite or other rough treatment in close proximity to the fish sought. In some cases, leader **18** may even be made of steel wire. Leader **18** is attached to artificial lure **10** at attachment ring **38**. A number of hooks **12** extend outward from artificial lure **10**.

FIG. 2 illustrates a second type of prior art artificial bait - worm **20**. Worm **20** is typically molded from a pliable plastic or rubber. An offset hook **22** is inserted through worm **20**, leaving hook ring **24** protruding out the forward portion. Leader **18** is then tied or otherwise attached to hook ring **24**.

The use of scent-type attractants is also known in the prior art. These formulations, such as fish oil, have been inserted into a reservoir within worm **20**, where they leak out through a small

orifice. Fish oil reservoirs have also been provided within artificial lures such as the one depicted in FIG. 1.

BRIEF SUMMARY OF THE INVENTION

A fish attractant slug made from a compound of fish attracting scents. The slug includes a helix allowing it to be placed on a fishing line without detaching the bait. The slug includes a center bore and an outside surface. The outside surface opens into a helix (other embodiments are also disclosed) which connects with the center bore. In order to install the device, the user wraps the fishing line around the spiral groove, then pulls it taut. The tension placed on the fishing line pulls the line inward until it rests within the center bore.

The center bore is made large enough to pass over swivels and similar attachment hardware found on fishing lines. This fact is particularly advantageous when the user wishes to change or replenish the attractant slug. It is common for the artificial lure to be trolled behind a moving boat. It may be one hundred feet or more astern. To add a new attractant slug to the lure, the user attaches the slug to the line close to the point where the line enters the rod. The slug then passes down the line, enters the water, and travels toward the lure. The center bore allows the slug to pass along until it comes to rest against the artificial lure. It is then propelled through the water at the same velocity as the lure, whereupon the turbulent flow of water over the slug causes the attractant material to dissolve. Fish attractant is thereby dispersed over the artificial lure.

BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWINGS

FIG. 1 is an isometric view, showing a prior art artificial lure.

FIG. 2 is an isometric view, showing a prior art worm.

FIG. 3 is an isometric view, showing the present invention.

FIG. 4 is an isometric view, showing the installation of the present invention.

FIG. 5 is an isometric view, showing the installation of the present invention.

FIG. 6 is an isometric view, showing the installation of the present invention.

FIG. 7 is an isometric view, showing the installation of the present invention.

FIG. 8 is an isometric view, showing the present invention installed on an artificial lure.

FIG. 9 is an isometric view, showing the present invention installed on a worm.

FIG. 10 is an isometric view, showing the use of a zig-zag groove.

FIG. 11 is an isometric view, showing the use of an S-curve groove.

FIG. 12 is an isometric view, showing the use of a crescent groove.

FIG. 13 is an isometric view, showing the use of a chevron groove.

FIG. 14 is an isometric view, showing an artificial lure being trolled.

FIG. 15 is an isometric view, showing the loading of an attractant slug onto the trolling line.

FIG. 16 is an isometric view, showing the attractant slug traveling toward the artificial lure.

FIG. 17 is an isometric view, showing the operation of the attractant slug.

REFERENCE NUMERALS IN THE DRAWINGS

10	artificial lure	12	hook
14	fishing line	16	swivel

18	leader	20	worm
22	offset hook	24	hook ring
26	attractant slug	28	body
30	center bore	32	spiral groove
34	entry slot	36	exit slot
38	attachment ring	40	zig-zag groove
42	S-curve groove	44	crescent groove
46	chevron groove	48	glitter
50	scent stream	52	rod

DETAILED DESCRIPTION OF THE INVENTION

The present invention is an attachable fish attractant which slowly disperses the attracting ingredients into the water during use. FIG. 3 depicts attractant slug **26**. It is formed as body **28**, having a central bore **30** running from its upper extreme to its lower extreme (with "upper" and "lower" being used in the context of the orientation shown in the view). The outer surface is formed in a smooth, hydrodynamic shape. Spiral groove **32** is cut into the outer surface. The inner portion of spiral groove **32** opens into central bore **30**. The upper extreme (in the view as shown) of spiral groove **32** terminates in entry slot **34**, with the lower extreme terminating in exit slot **36**.

In use, attractant slug **26** will preferably be placed in close proximity to the bait. The ideal location is immediately ahead of the bait, attached to leader **18**. Attractant slug **26** is made of a material which slowly dissolves in water. Thus, after a short period of use, attractant slug **26** will dissolve and need to be replaced. It is obviously desirable to be able to replace attractant slug **26**

without having to detach the bait from the leader. Spiral groove **32** is provided for this purpose, as will be explained in the following.

FIGs. 4 through 7 show the sequence of placing attractant slug **26** on leader **18** (or any other type of fishing line). Throughout the following descriptions, those skilled in the art will realize that the use of leader **18** is optional. In many applications, fishing line **14** will be directly attached to the lure without the use of a leader. Thus, for purposes of attaching the invention, a leader or a fishing line are interchangeable.

In FIG. 4, leader **18** has been passed through entry slot **34** and into the leading portion of spiral groove **32**. The user then wraps leader **18** around spiral groove **32**, as shown in FIG. 5. In FIG. 6, leader **18** has been wrapped completely around spiral groove **32**, so that a portion of leader **18** lies entirely within spiral groove **32**. At this point, the user pulls on the free ends of leader **18** to place tension on the portion lying within spiral groove **32**. This action results in leader **18** being drawn down into center bore **30**, as shown in FIG. 7. Once leader **18** has been drawn into center bore **30**, it will not tend to reenter spiral groove **32**. Thus, attractant slug **26** is securely fastened to leader **18**.

Once in the state shown in FIG. 7, attractant slug **26** is free to move back and forth on leader **18**. It may then be pushed along leader **18** until it comes up against the bait. As the bait is then dragged through the water, hydrodynamic forces will tend to keep attractant slug **26** positioned immediately ahead of the bait, where it will slowly dissolve and release the attractant materials over the bait.

FIG. 8 shows attractant slug **26** in position in front of artificial lure **10**. FIG. 9 shows attractant slug **26** in position in front of worm **20**. Of course, as those skilled in the art will know, attractant slug **26** could just as easily be placed in front of a natural bait, such as a shrimp or a cigar

minnow. The reader will appreciate that what was denoted as the upper extreme of attractant slug **26** in FIG. 3 is more aptly referred to as the leading extreme in FIGs. 8 and 9 (with respect to the direction of towing the bait). Likewise, what was denoted as the lower extreme in FIG. 3 is more appropriately referred to as the trailing extreme in FIGS. 8 and 9.

Returning now to FIG. 3, those skilled in the art will also realize that the diameter of center bore **30** can be increased substantially without affecting the operation of the device. Looking at FIG. 1, the enlargement of center bore **30** allows attractant slug **26** to pass easily over swivel **16**. The center bore can likewise pass over other familiar line hardware, such as "sinkers" (weights), clips, and similar fasteners. All these items will be generically referred to as "line hardware."

The ability of the center bore to pass over line hardware is important for the following reason: When a lure is towed in a trolling fashion, it may be 50 yards or more behind the boat. In order to replace a conventional attractant, the lure must be reeled in, serviced, and allowed to trail back out to its original position (a time consuming process). Using the present invention - with an appropriately sized center bore **30** - the user simply places attractant slug **26** on fishing line **14** near the point where it attaches to the fishing rod. Gravity (sometimes with help from the user) cause attractant slug **26** to slide down the line and into the water. Once attractant slug **26** is in the water, hydrodynamic forces slide it aft along the fishing line until it comes to rest against the front of the bait. Thus, the user can replace the attractant slug, or add additional attractant slugs, without interrupting the trolling.

FIGs. 14-17 illustrate this process. FIG. 14 schematically shows a trolling set-up. Fishing line **14** extends from rod **52** back to artificial lure **10**. The discontinuity is shown in the line because -

in reality - the lure may be 50 yards or more from the rod. The rod is typically located in a boat which is being propelled forward at relatively low speed.

The use of an attractant is desirable for trolling. The prior art allows an attractant to be added to the lure. However, trolling is often conducted for an hour or more. The attractant must be periodically renewed. In the prior art, this means reeling in the lure, replacing the attractant, and playing it back out to the trolling position. Such a cycle consumes ten to fifteen minutes.

The user may also wish to change the attractant. If it becomes apparent that fish are around, but they are not hitting the lure, the user will want to make a change. In the prior art, such a change also required reeling in the lure. The present invention eliminates this problem.

FIG. 15 shows the portion of fishing line **14** in close proximity to rod **52**. The user places attractant slug **26** on this portion of the line, as previously described (FIGs. 4 through 7). Gravity then pulls the slug down the line until it enters the water. Once the slug enters the water, hydrodynamic drag will push it along the line toward the lure.

FIG. 16 shows the slug moving along the line toward the lure. The reader will observe how center bore **30** is large enough to pass over the line hardware. The slug continues until it comes up against the leading portion of artificial lure **10**.

FIG. 17 shows attractant slug **26** in position against the front of artificial lure **10**. Once the slug reaches this position, it is propelled forward by the lure. The water moving over the slug then begins dissolving the material comprising the slug. The reader will observe how the slug expands toward a truncated trailing end. This truncated trailing end cause turbulent flow over the trailing end of the slug and the leading extreme of the lure. The lure is thereby enveloped in scent streams **50**.

Other attractant materials can be embedded within the slug It is known, for example, that fish

respond to bright flashes. It may therefore be desirable to embed glitter particles in the attractant slug. These break free as the slug dissolves. They are shown as glitter **48** in FIG. 17. The position and shape of the attractant slug causes the glitter to flow around the lure in a turbulent fashion.

Returning now to FIG. 3, those skilled in the art will realize that the interaction of spiral groove **32** and center bore **30** allows the convenient installation of attractant slug **26** on virtually any type of flexible line. Those skilled in the art will realize, however, that the helical form of spiral groove **32** illustrated is not the only shape that can perform this function. The key is to provide a slot connecting the outer surface of attractant slug **26** with center bore **30**, which is sufficiently curved (non-straight) to require the fishing line to be manipulated into a curved shape in order to enter center bore **30**. In use, the fishing line is maintained in tension. Thus, it is unlikely that it will lapse into a curved shape which would allow it to escape center bore **30**.

A simple crescent shape can be substituted for spiral groove **32**. Additional shapes include a zig-zag, an S-curve, and a chevron. However, as best seen in FIG. 5, the use of the helical shape allows the user to naturally wrap the fishing line into spiral groove **32**. This is true because persons familiar with fishing equipment are accustomed to wrapping line around a spool. Thus, the helical shape constitutes the preferred embodiment.

FIGs. 10-13 illustrate the alternate embodiments for the groove. FIG. 10 shows zig-zag groove **40** connected to center bore **30**. FIG. 11 shows the use of S-curve groove **42**. FIG. 12 shows the use of crescent groove **44**. FIG. 13 shows the use of chevron groove **46**. All these grooves serve the same purpose as spiral groove **32**, in that the line is forced through these grooves into the center bore.

The center bore must still be large enough to pass over the line hardware. The embodiments of the attractant slug shown in FIGs. 10-13 are actually larger overall than the slug shown in FIG. 3. The center bores are the same diameter as the one shown in FIG. 3, but they appear smaller in comparison to the overall size of the attractant slug. The reader should be aware that the attractant slug can be made in many different sizes. Larger sizes can be used with larger lures, or where an extended attractant release time is desired.

The material selected for attractant slug **26** is obviously important. The method of mounting attractant slug **26** on the fishing line allows the use of rigid and substantially rigid materials. However, the material must also slowly dissolve in water in a controllable fashion. One particularly suitable compound is a moldable gelatin in which the fish attractant is dissolved or suspended. Polyglycols can be used as well. Additional specific examples of effective materials include polyglycol 1450, polyglycol 3350, acacia gum, sorbitol, pectin, starch, and a variety of soluble polymers.

The desired scent is then blended with the gelatin while it is still in the liquid state. The liquid is then injected into a cavity mold and allowed to solidify. In this fashion, the shape depicted in FIG. 3 can be molded as one integral unit.

The external profile of attractant slug **26** can affect how it behaves in the water, as well as the rate at which the material dissolves. The bullet shape shown tends to cause turbulent flow near the trailing extreme of the material, which can promote dispersion of the attractant. If a slower dispersion rate is desired, a spherical or teardrop shape can be employed. Those skilled in the art will realize that an endless variety of external shapes are possible.

The actual type of fish attracting agent used is not critical to the present invention. Many different types of attracting agent are well known in the prior art. Examples include meal made of ground and dried squid, shrimp, sardines, bunker, or other bait fishes. Waste materials normally discarded by the canning industry (such as heads, guts, etc.) are also often used. Artificial chemicals can be employed as well. Additional suitable fish attractants include Menhaden, Shrimp, Pogie, Cigar minnow, Squid, Crayfish, Bluegill, Shad, Spanish Sardine, Boston Mackerel, Bonita, Northern Mackerel, Scallop, Mullet, Garlic, Salt, and synthesized amino acids.

Other materials can be added to the invention as well. As one example, bright colors and microglitter are often employed to attract fish. Fish feeding on natural baits often produce an explosion of reflective scales in the water. The addition of microglitter to the attractant slug causes a release of bright particles as the slug dissolves, which mimics this natural phenomenon (as shown in FIG. 17).

The preceding description contains significant detail regarding the novel aspects of the present invention. It should not be construed, however, as limiting the scope of the invention but rather as providing illustrations of the preferred embodiments of the invention. Thus, the scope of the invention should be fixed by the following claims, rather than by the examples given.